



NEW PEST ADVISORY GROUP (NPAG)
Plant Epidemiology and Risk Analysis Laboratory
Center for Plant Health Science & Technology

NPAG Report

***Xyleborus maiche* (Stark): Ambrosia Beetle**

Coleoptera/Scolytidae

NPAG Chair Approval Date: July 10, 2006

Initiating Event, Notifier and Affiliation, Notification Date, and First Reported Date: Bob Carlson (SEL) notified the NPAG on 21 April 2006 that *Xyleborus maiche* was detected for the first time in the United States (Carlson 2006a). Kim Revay collected multiple specimens from Lindgren funnel traps in Moon Park, Pennsylvania between 26 May 2005 and 16 August 2005; Kim monitored the traps as part of the National Exotic Wood Borer and Bark Beetle Survey (Vandenberg 2006). Specimens were positively identified as *Xyleborus maiche* by Natalia Vandenberg (SEL), Robert Rabaglia (USFS), and Michail Mandelshtam (Zoological Institute of Russian Academy of Sciences) (Carlson 2006b).

Data Sheet(s): None.

Current PPQ Policy: *Xyleborus maiche* is listed as a reportable/actionable pest in Pest ID (AQAS 2006). The species *Xyleborus maiche* is not listed on the APHIS Regulated Plant Pest List, but the genus *Xyleborus* is listed (USDA 2006). (Queries conducted 16 June 2006).

Pest Situation Overview:

Exotic status: *Xyleborus maiche* is new to the United States (Carlson 2006b).

Biology: Little is known about the biology of *X. maiche*, but it appears to behave like most *Xyleborus* beetles, which attack stressed or injured woody plants (Wood 1982). Michail Mandelshtam collected specimens from broken limbs and dying maples, while Aleksei Kurenzov reported high densities in fragments of cut trees (Carlson 2006b). Kurenzov also reported the colonization of thin, drying, tree stems (Carlson 2006b). All *Xyleborus* beetles can reproduce without mating, and they culture fungi, which the larvae consume for nutrition (Wood 1982, Borror *et al.* 1989).

Prevalence and global distribution: *Xyleborus maiche* occurs in China, East Russia, North Korea, and Pennsylvania (Wood and Bright 1992, Carlson 2006b).

Host range: **Aceraceae** - *Acer* spp. (maple), *Acer barbinerve*, *Acer mandshuricum*, **Betulaceae** - *Alnus* spp. (alder), *Alnus fruticosa*, *Alnus hirsuta*, *Betula dahurica*, *Betula japonica*, *Corylus mandshurica*, **Celastraceae** - *Euonymus* sp. (spindletree), **Juglandaceae** - *Juglans mandshurica* (Manchurian walnut), **Magnoliaceae** - *Magnolia* sp., **Oleaceae** - *Fraxinus manshurica* (Manchurian ash), *Syringa reticulata* ssp. *amurensis* (Amur lilac), **Rutaceae** - *Phellodendron amurense* (Amur corktree), **Ulmaceae** - *Ulmus* sp. (elm) (Wood and Bright 1992, Carlson 2006b).

Potential pathways and spread: *Xyleborus maiche* has never been intercepted at a U.S. port of entry, but beetles identified only as *Xyleborus* sp. have been intercepted 104 times on a variety of woody plants and plant products (AQAS 2006). Shipments of infested plants and plant products could, therefore, introduce *X. maiche* into new areas. Female *Xyleborus* beetles are capable of flight and readily disperse into previously non-infested areas (CABI 2005).

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Potential economic and environmental impacts; trade implications: Reports of economic damage caused by *X. maiche* are lacking. Michail Mandelshtam stated that it does not cause serious damage in Far-East Russia (Carlson 2006b). All *Xyleborus* beetles can; however, cause economic damage under favorable conditions (CABI 2005). The few that kill healthy trees are associated with virulent fungi, like those in the genera *Ceratocystis*, *Ophistomata*, *Graphium*, and *Leptographium* (Krokene and Solheim 1998). *Xyleborus maiche* has not been associated with these fungi, so it is not expected to kill healthy trees. Although it is not expected to kill healthy trees, it is impossible to predict its impact in North America (Carlson 2006b). It could attack threatened and endangered species, e.g. *Betula uber*, and it could cause a loss of markets because *Xyleborus* beetles are considered high risk quarantine pests (CABI 2005).

NPAG teleconference(s): None held.

Current response and activities, technology/knowledge gaps and needs: Pennsylvania has not taken any regulatory action in response to the detection of *X. maiche* (Blosser 2006). The impact that this beetle will have on U.S. agriculture and forestry is unknown, as is its U.S. distribution.

NPAG Recommended PPQ Policy: The NPAG recommends no change in PPQ policy for *Xyleborus maiche*. Retain as a reportable/actionable pest until its impacts on U.S. agriculture and forestry, and its U.S. distribution are known.

Recommendations:

- 1.) The NPAG recommends no change in PPQ policy for *Xyleborus maiche*. Retain as a reportable/actionable pest until its impacts on U.S. agriculture and forestry, and its U.S. distribution are known. **Action Leader: Joe Cavey, PPQ-NIS.**
- 2.) The NPAG recommends monitoring the impacts and delimiting the spread of *Xyleborus maiche* through the National Exotic Wood Borer and Bark Beetle Survey. **Action Leaders: Deborah McPartlan and Billy Newton, PPQ-EDP.**
- 3.) The NPAG recommends a re-evaluation of PPQ policy for *Xyleborus maiche* in one year based on the results of the National Exotic Wood Borer and Bark Beetle Survey. **Action Leader: Joe Cavey, PPQ-NIS.**

Direct referral: To Joe Cavey, PPQ-NIS for changes in status in Pest ID, and to Deborah McPartlan and Billy Newton for delimitation through the National Exotic Wood Borer and Bark Beetle Survey.

Key References:

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Wood, S.L., and D.E. Bright. 1992. A Catalog of Scolytidae and Platypodidae (Coleoptera), Part 2: Taxonomic Index Volume A. Brigham Young University, Provo, Utah.

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Chair's Approval: /s/ *Brian M. Spears*

Signature Date: July 10, 2006

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